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SEQUENCE LISTING

<110> Aventis Research & Technologies GmbH & Co KG

<120> Novel Antifungal Agents and Fungicides, Method for the Production
Thereof and Their Use

<130> 199at07

<140> PCT/EP00/04972

<141> 2000-05-31

<150> DE19930959.0

<151> 1999-07-05

<160> 4

<170> PatentIn Ver. 2.1

<210> 1

<211> 930

<212> DNA

<213> Williopsis californica

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<221> CDS

<222> (1)..(930)

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cag	gcc	atc	ggc	caa	cta	gct	ttt	aac	ttg	ggg	gtc	aag	gat	aac	tca	96
Gln	Ala	Ile	Gly	Gln	Leu	Ala	Phe	Asn	Leu	Gly	Val	Lys	Asp	Asn	Ser	
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ggg	cag	tgc	aag	act	gcc	tca	gag	tac	aag	gat	gac	ttg	tct	acc	ctt	144
Gly	Gln	Cys	Lys	Thr	Ala	Ser	Glu	Tyr	Lys	Asp	Asp	Leu	Ser	Thr	Leu	
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tca	ggc	tac	aca	tct	aag	gtt	aga	gtc	tac	gct	gcc	tca	gac	tgt	aac	192
Ser	Gly	Tyr	Thr	Ser	Lys	Val	Arg	Val	Tyr	Ala	Ala	Ser	Asp	Cys	Asn	
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act	ttg	cag	act	ttg	ggg	cca	gtt	gtc	gaa	gag	gct	ggc	ttc	tca	ttt	240
Thr	Leu	Gln	Thr	Leu	Gly	Pro	Val	Val	Glu	Glu	Ala	Gly	Phe	Ser	Phe	
65					70					75					80	

ttc	gtt	ggg	att	tgg	cca	aac	gat	gat	gct	cac	ttc	cag	gaa	gag	caa	288
Phe	Val	Gly	Ile	Trp	Pro	Asn	Asp	Asp	Ala	His	Phe	Gln	Glu	Glu	Gln	
			85					90						95		

gac	gct	ttg	aaa	act	tat	ttg	cca	aag	att	aag	aga	tcc	aca	gtg	gag	336
Asp	Ala	Leu	Lys	Thr	Tyr	Leu	Pro	Lys	Ile	Lys	Arg	Ser	Thr	Val	Glu	
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gcc ttc act gtt ggt tct gag gcc ttg tat aga gat gat atg act gct 384
Ala Phe Thr Val Gly Ser Glu Ala Leu Tyr Arg Asp Asp Met Thr Ala
115 120 125

caa gag ttg gct gac aga atc aaa act att aga gag ttg gtt gcc act 432
Gln Glu Leu Ala Asp Arg Ile Lys Thr Ile Arg Glu Leu Val Ala Thr
130 135 140

att gac gac tcc gaa ggt aac tca tat gct ggt att cca gtt ggt ttc 480
Ile Asp Asp Ser Glu Gly Asn Ser Tyr Ala Gly Ile Pro Val Gly Phe
145 150 155 160

gtt gac tcc tgg aac gtt ttg gtt gat ggt gct tct cac cca gct att 528
Val Asp Ser Trp Asn Val Leu Val Asp Gly Ala Ser His Pro Ala Ile
165 170 175

gtt gag gct gat gtt gtg ttc gcc aat gct ttc tct tac tgg caa ggt 576
Val Glu Ala Asp Val Val Phe Ala Asn Ala Phe Ser Tyr Trp Gln Gly
180 185 190

cag act cag cag aac tcg tca tac tct ttc ttt gac gac att atg caa 624
Gln Thr Gln Gln Asn Ser Ser Tyr Ser Phe Phe Asp Asp Ile Met Gln
195 200 205

gct ttg caa acc att caa act gct aag ggt gag aca gat atc act ttc 672
Ala Leu Gln Thr Ile Gln Thr Ala Lys Gly Glu Thr Asp Ile Thr Phe
210 215 220

tgg gtt ggt gag acc ggc tgg cca acc gat ggt act cac ttt gaa gac 720
Trp Val Gly Glu Thr Gly Trp Pro Thr Asp Gly Thr His Phe Glu Asp
225 230 235 240

tct gtc cca tct gtt gag aat gct cag acc ttc tgg aaa gat gcc gtc 768
Ser Val Pro Ser Val Glu Asn Ala Gln Thr Phe Trp Lys Asp Ala Val
245 250 255

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Cys Ala Ile Arg Gly Trp Gly Ile Asn Val Ile Ala Phe Glu Ala Phe
260 265 270

gac gaa gct tgg aag cca gat acc tct ggt acc tct gat gtg gaa aag 864
Asp Glu Ala Trp Lys Pro Asp Thr Ser Gly Thr Ser Asp Val Glu Lys
275 280 285

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Tyr Trp Gly Val Trp Asp Ser Asn Ser Lys Leu Lys Tyr Asp Leu Ser
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tgt gac ttt acc tct tag 930
Cys Asp Phe Thr Ser
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<212> PRT

<213> Williopsis californica

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65					70				75						80
Phe	Val	Gly	Ile	Trp	Pro	Asn	Asp	Asp	Ala	His	Phe	Gln	Glu	Glu	Gln
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Asp	Ala	Leu	Lys	Thr	Tyr	Leu	Pro	Lys	Ile	Lys	Arg	Ser	Thr	Val	Glu
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Ala	Phe	Thr	Val	Gly	Ser	Glu	Ala	Leu	Tyr	Arg	Asp	Asp	Met	Thr	Ala
	115						120					125			
Gln	Glu	Leu	Ala	Asp	Arg	Ile	Lys	Thr	Ile	Arg	Glu	Leu	Val	Ala	Thr
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Ile	Asp	Asp	Ser	Glu	Gly	Asn	Ser	Tyr	Ala	Gly	Ile	Pro	Val	Gly	Phe
145					150				155						160
Val	Asp	Ser	Trp	Asn	Val	Leu	Val	Asp	Gly	Ala	Ser	His	Pro	Ala	Ile
			165						170					175	
Val	Glu	Ala	Asp	Val	Val	Phe	Ala	Asn	Ala	Phe	Ser	Tyr	Trp	Gln	Gly
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Gln	Thr	Gln	Gln	Asn	Ser	Ser	Tyr	Ser	Phe	Phe	Asp	Asp	Ile	Met	Gln
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Ala	Leu	Gln	Thr	Ile	Gln	Thr	Ala	Lys	Gly	Glu	Thr	Asp	Ile	Thr	Phe
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Trp	Val	Gly	Glu	Thr	Gly	Trp	Pro	Thr	Asp	Gly	Thr	His	Phe	Glu	Asp
225					230					235					240
Ser	Val	Pro	Ser	Val	Glu	Asn	Ala	Gln	Thr	Phe	Trp	Lys	Asp	Ala	Val
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Cys	Ala	Ile	Arg	Gly	Trp	Gly	Ile	Asn	Val	Ile	Ala	Phe	Glu	Ala	Phe
			260					265					270		
Asp	Glu	Ala	Trp	Lys	Pro	Asp	Thr	Ser	Gly	Thr	Ser	Asp	Val	Glu	Lys
	275						280					285			
Tyr	Trp	Gly	Val	Trp	Asp	Ser	Asn	Ser	Lys	Leu	Lys	Tyr	Asp	Leu	Ser
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Cys	Asp	Phe	Thr	Ser											
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ata tat act agt gct aga aac ata tta gac aga gaa tac aca gca aac				96
Ile Tyr Thr Ser Ala Arg Asn Ile Leu Asp Arg Glu Tyr Thr Ala Asn				
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gaa tta aaa act gct ttt gga gat gaa gaa att ttt aca gat ttg acg				144
Glu Leu Lys Thr Ala Phe Gly Asp Glu Glu Ile Phe Thr Asp Leu Thr				
35		40	45	
tat cac att cac gtt aac gtc agt ggc gaa att gac tct tac tat cat				192
Tyr His Ile His Val Asn Val Ser Gly Glu Ile Asp Ser Tyr Tyr His				
50		55	60	
aat tta gtc aat ttt gtc gat aac gct cta gca aac aaa gat att aat				240
Asn Leu Val Asn Phe Val Asp Asn Ala Leu Ala Asn Lys Asp Ile Asn				
65		70	75	80
aga tat ata tac gct ata ttt aca cag cag aca aac tat aca gag gat				288
Arg Tyr Ile Tyr Ala Ile Phe Thr Gln Gln Thr Asn Tyr Thr Glu Asp				
85		90	95	
ggg ctc att gag tac tta aat cat tac gat tca gag act tgc aaa gat				336
Gly Leu Ile Glu Tyr Leu Asn His Tyr Asp Ser Glu Thr Cys Lys Asp				
100		105	110	
atc att act cag tat aat gtt aac gta gac act agt aac tgt ata agc				384
Ile Ile Thr Gln Tyr Asn Val Asn Val Asp Thr Ser Asn Cys Ile Ser				
115		120	125	
aat act aca gat caa gct aga ctc caa cgt cgc gga ggg tgg gtg aac				432
Asn Thr Thr Asp Gln Ala Arg Leu Gln Arg Arg Gly Gly Trp Val Asn				
130		135	140	
cca cat tgt agt ggt gat aac tta gcc gat act agc gat tgt tgt aac				480
Pro His Cys Ser Gly Asp Asn Leu Ala Asp Thr Ser Asp Cys Cys Asn				
145		150	155	160
ttg gct tat aac aag att aac ccc tct tca aac tta cag tca tgg aat				528
Leu Ala Tyr Asn Lys Ile Asn Pro Ser Ser Asn Leu Gln Ser Trp Asn				
165		170	175	
tat gtt gtc ggg cag tgt cac tat att tct cac gct aat gga aag gta				576
Tyr Val Val Gly Gln Cys His Tyr Ile Ser His Ala Asn Gly Lys Val				
180		185	190	
tgt agt ggt gct gac agg caa cag tta gct gaa aat gta tgt aac tgg				624
Cys Ser Gly Ala Asp Arg Gln Gln Leu Ala Glu Asn Val Cys Asn Trp				
195		200	205	
tgt cag gtt aac ggt ggt gtt agc gct ttt gct agc agt agt tct gca				672
Cys Gln Val Asn Gly Gly Val Ser Ala Phe Ala Ser Ser Ser Ser Ala				
210		215	220	
cat cca ggt gct tgc atg agt gat gta ggg ttc tgc tat gct tag				717
His Pro Gly Ala Cys Met Ser Asp Val Gly Phe Cys Tyr Ala				
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Glu Leu Lys Thr Ala Phe Gly Asp Glu Glu Ile Phe Thr Asp Leu Thr
35 40 45
Tyr His Ile His Val Asn Val Ser Gly Glu Ile Asp Ser Tyr Tyr His
50 55 60
Asn Leu Val Asn Phe Val Asp Asn Ala Leu Ala Asn Lys Asp Ile Asn
65 70 75 80
Arg Tyr Ile Tyr Ala Ile Phe Thr Gln Gln Thr Asn Tyr Thr Glu Asp
85 90 95
Gly Leu Ile Glu Tyr Leu Asn His Tyr Asp Ser Glu Thr Cys Lys Asp
100 105 110
Ile Ile Thr Gln Tyr Asn Val Asn Val Asp Thr Ser Asn Cys Ile Ser
115 120 125
Asn Thr Thr Asp Gln Ala Arg Leu Gln Arg Arg Gly Gly Trp Val Asn
130 135 140
Pro His Cys Ser Gly Asp Asn Leu Ala Asp Thr Ser Asp Cys Cys Asn
145 150 155 160
Leu Ala Tyr Asn Lys Ile Asn Pro Ser Ser Asn Leu Gln Ser Trp Asn
165 170 175
Tyr Val Val Gly Gln Cys His Tyr Ile Ser His Ala Asn Gly Lys Val
180 185 190
Cys Ser Gly Ala Asp Arg Gln Gln Leu Ala Glu Asn Val Cys Asn Trp
195 200 205
Cys Gln Val Asn Gly Gly Val Ser Ala Phe Ala Ser Ser Ser Ala
210 215 220
His Pro Gly Ala Cys Met Ser Asp Val Gly Phe Cys Tyr Ala
225 230 235